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ABSTRACT

This report evaluates the Early Childhood Language-Centered Intervention Program in New York City Public Schools. The program was designed to promote the development of preschool handicapped students in a variety of areas. The program objective proposed that the target students would show statistically significant improvement at the .05 level in each of the following skills: language, fine-motor, gross-motor, cognitive, and social-emotional. The Learning Accomplishment Profile (LAP) was used to evaluate the attainment of the objectives for all areas except social-emotional, which was evaluated through the Levenstein Child Behavior Traits Rating Scale. Results show that (1) the five program objectives were attained, with students scoring statistically significant gains in language, gross-motor skills, fine-motor skills, cognition, and socio-emotional development. Forty percent of the children completing the program were placed in regular kindergarten classes for the following year. The report recommends that more classes be opened to serve children on the waiting list, and that teachers receive training sessions concerning individualization of the instructional program. (AOS)

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O.E.E. EVALUATION REPORT
E.H.A., PART B
5001-62-06610

EARLY CHILDHOOD LANGUAGE-CENTERED INTERVENTION PROGRAM

1980-1981

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EARLY CHILDHOOD LANGUAGE-CENTERED INTERVENTION PROGRAM

I. NEEDS

Although it is estimated that between seven and ten percent of the preschool population has a handicapping condition, the New York City Public Schools had only one preschool handicapped program in two sites to serve the entire city. Moreover, since bus transportation was not provided, children accepted at these two sites had to be transported by their parents. As a result, only a small number of preschool handicapped children were indeed served.

Research has clearly demonstrated the importance of early intervention to the development of these children. Children with delayed development who received appropriate preschool instruction were better able to succeed in school and to adjust to or overcome their handicapping conditions. These studies have also indicated that parental involvement is essential to the success of early intervention programs. Hence, there is a definite need for a city-wide program for preschool handicapped children which would include classroom instruction, parental training and support, and bus transportation.

II. OBJECTIVES

This program was designed to promote the development of preschool handicapped students in a variety of areas. The specific program objective proposed that by June, 1981, the target students would show statistically significant improvement, at the .05 level, in each of the following skills: language; fine-motor; gross-motor; cognitive; and social-emotional. The

Learning Accomplishment Profile* was used to evaluate the attainment of the objectives for all areas except social-emotional, which was evaluated through the Levenstein Child Behavior Traits Rating Scale.**

III. RESULTS OF PROGRAM OBSERVATIONS

This program provided early educational intervention for children between three and five years of age who had physical handicaps or developmental delays in language, social, perceptual, or motor functioning. Bus transportation was provided through Family Court funding.

Twelve classes were established at five schools in three boroughs of New York City: eight classes were in Brooklyn, two in the Bronx, and two in Queens. Each classroom was staffed by a special education teacher, an educational assistant, and a family worker. Since classes lasted a half day four times a week, each staff member served two classes. In addition, two itinerant language therapists worked with children individually, and assisted the teachers in planning language lessons; six family workers conducted home visits for parent training. Five of the twelve classes were observed for this evaluation report.

The instructional program included typical early-childhood educational activities, with a special emphasis on cognitive and language skills. A variety of instructional materials appropriate for individual activities were available

*LeMay, D.W. et al. Learning Accomplishment Profile, Diagnostic Edition (Revised). Chapel Hill, North Carolina: Chapel Hill Training Outreach Project.

**Levenstein, P. et al. Description of Child's Behavior Traits. In Johnson, Orval (Ed.) Tests and Measurements in Child Development, Handbook II. San Francisco: Jossey-Bass, 1976, 415-416.

in each room, including blocks, dramatic-play equipment, toys, games, and art supplies. However, the teachers seemed more comfortable teaching group lessons than providing individualized instruction while the children interacted with the materials.

Each school was affiliated with a health facility which provided the program with referrals and diagnostic assessments, and the children with medical, psychological, physical, occupational, and social services. To coordinate the educational program with the health services, case conferences were held at mid-year and in June by school social workers.

The teachers had prepared the lessons carefully and presented them well. However, even though an individual educational plan was developed for each child specifying short-term goals and instructional activities, group instruction by the teacher predominated in most of the classes observed; frequently, the aides and family workers observed and assisted with classroom management, rather than participating directly in the instructional program. In some cases, it appeared to the observed that it would have been more effective for each adult to work with two or three children rather than to concentrate on group lessons. In all of the cases, the teachers integrated language development into almost every activity. They used charts, posters, games, and many other devices to improve language functioning.

At each site, a family worker provided outreach services. Each family received one home visit a week from April through June to strengthen communication between the family and the program, and to coordinate the activities between home and school. The family workers instructed the parents in the use of toys and games which were provided by the program.

Family workshops were held to help the parents understand their children's development and problems that their children might encounter. In addition, they were instructed in techniques to promote the language and cognitive development of their children.

IV. EVALUATION

To determine whether, in response to program intervention, the target students improved significantly in language, fine-motor, gross-motor, and cognitive skills, the Learning Accomplishment Profile, Final Form (LAP) was administered pre and post; gains in social-emotional development were measured by pre- and post-administrations of the Levenstein Child Behavior Traits Rating Scale. Six months elapsed between the pre- and posttests.

The LAP consists of 270 items that assess child development in four areas: 56 items in language; 80 in fine-motor skills; 79 in gross-motor skills; and 111 in cognition (these 111 items include some of the language items). The scale was specifically designed to monitor and evaluate instructional programs for child development. The skills sampled by the items correspond to normal developmental ages of from six to 72 months. One point is scored for each skill demonstrated at criterion efficiency.

The interrater reliability of the total test was established at .98; interrater reliabilities for the scales were .91 for language, .97 for fine-motor skills, .97 for gross-motor skills, and .96 for cognition. Test-retest reliabilities ranged from a minimum of .72 for language to a maximum of .94 for writing.

The validity of the LAP was established through correlations between scale scores and chronological age. The observed correlations were .79 for language, .91 for fine-motor skills, .93 for gross-motor skills; and .86 for cognition.

The students' mean pre- and posttest scores for each of the four scales were compared through *t* tests for correlated means. Table 1 presents a summary of these comparisons. The mean student gains observed for all four scales

were statistically significant beyond the .01 level. The largest mean gain ($\underline{M}$ = 15.3) was observed for the fine-motor-skills scale; the mean gains for language, cognition, and gross-motor skills were 10.9, 10.2 and 9.7, respectively.

The Levenstein Child Behavior Traits Rating Scale (CBT), which was used to measure social and emotional development, consists of twenty items which rate, on a five-point scale, the presence of behaviors constructed to reflect a child's emotional well-being and social adjustment. The items are classified under five scales: responsible independence, social cooperation, cognitively related skills, emotional stability, and task orientation. The scale was developed to evaluate the socioemotional status of low-income children between the ages of two and four years. The CBT's internal consistency was measured at .95. Validity was demonstrated by a correlation of .70 with teacher ratings of the presence of school problems.

Table 2 presents a summary of the $\underline{t}$ test for correlated means comparing the students' mean pre- and posttest scores on the total CBT. The mean gain of eight points was statistically significant at the .01 level.

These findings indicate that the five program objectives were attained; that is, the students scored statistically significant gains in language, gross-motor skills, fine-motor skills, cognition, and socioemotional development. Moreover, the educational significance of these gains is supported by the large percentage of the target students (i.e., 40 percent) placed in non-special education kindergarten classes following program intervention.

V. CONCLUSIONS AND RECOMMENDATIONS

The analyses of data from observations, interviews, and developmental and behavioral inventories lead to the following conclusions about the Early Childhood Language-Centered Intervention program.

- This project is being implemented in an exemplary manner. The classes have been established, adequately staffed, and are functioning smoothly.
- The project materials are in adequate supply and of good quality. In general, the physical facilities are appropriate.
- The instructional program is proceeding well. There is a range of teacher effectiveness but on the whole, the staff is enthusiastic and competent.
- The preschool handicapped children who participated in the program showed significant skills improvement.
- Forty percent of the children completing the program have been placed in regular kindergarten classes for September, 1981.

Since the program appears to be effectively underway, attention to the following needs might further enhance the benefits to the target population.

- More classes should be opened to serve children on waiting lists. Additional clerical support should be provided to support this expansion.
- Teachers should receive training sessions concerning the individualization of the instructional program. Most of the teachers were observed to provide structured lessons in a formal group context, certainly an important aspect of the program. However, the children also need time to interact with materials on an individual basis. If more time is allocated to this type of activity, the paraprofessionals who presently spend time watching the teacher conduct these formal lessons could also interact directly with the children.

TABLE 1

SUMMARY OF THE COMPARISONS BETWEEN
MEAN PRE- AND POSTTEST SCORES
FOR THE FOUR SCALES OF THE
LEARNING ACCOMPLISHMENT PROFILE

Scale	Test Session	Mean	Standard Deviation	Mean Gain	N	t
Language	PRE	15.9	11.0	10.9	53	6.46**
	POST	26.8	12.5			
Fine Motor	PRE	37.5	14.8	15.3	53	6.61**
	POST	52.8	13.6			
Gross Motor	PRE	37.1	11.5	9.7	31	3.07**
	POST	46.8	15.1			
Cognition	PRE	12.8	10.7	10.2	53	5.99**
	POST	23.0	12.4			

**$p < .01$

TABLE 2

SUMMARY OF THE COMPARISON BETWEEN MEAN
PRE- AND POSTTEST SCORES ON THE
LEVINSTEIN CHILD BEHAVIOR TRAITS RATING SCALE

Test Session	Mean	Standard Deviation	Mean Gain	N	t
PRE	54.5	18.0	8.0	61	3.53**
POST	62.5	21.0			

**$p < .01$